

*Bromus setaceus* is *B. sterilis*, L.; probably introduced.

*Uiola* (*Brizopyrum*) *flexuosa* is *Brizopyrum spicatum*, Hook. and Arn.

*Elymus interruptus*. We cannot quite match this among the various puzzling forms of the genus from Texas.

*Elymus triticoides*—another name furtively appropriated from Nuttall—is a depauperate form of No. 2072, Hartweg, (and nearly of 2072, Wright), named by Col. Munro *E. dasystachys*, Trin., var. *E. condensatus*, Presl.

*Elymus glaucus*—also Nuttall's—appears scarcely, if at all, distinct from *E. Sibiricus*, L.

*Trisetum glabrum* is *Aira danthonioides*, Trin., the same as Hartweg's 2027; new to Texas.

*Trisetum interruptum* is *T. elongatum*, H.B.K.; it is in Lindheimer's and in one of Wright's earlier collections.

*Trisetum canescens* is the more hairy-leaved and striate form of *T. cernuum*, Trin., described from the specimen of "*T. elatum*," Nutt., which name Mr. Buckley has erased from the ticket, for no obvious reason (as the name is a good one), except to give some variety in form to his depredations.

*Hierochloa occidentalis*,—Nuttall's name appropriated as usual—is *H. borealis*, Rœm. & Schult.

Happily Mr. Buckley has spared the *Panicææ* and the *Andropoginææ*; for which, in the interest of all American botanists, I tender him my sincere thanks.

#### Notes upon some REPTILES of the Old World.

BY E. D. COPE.

*Atheris squamatus* Cope.

*Toxicoa squamata* Cope, Proc. Acad. Nat. Sci. Phila., 1859, p. 341.

*Echis squamatus* Hallow.

Professor Jan states\* that Schlegel's *Vipera chlorocochis* (*Toxicoa*, Cope, l. c.) possesses keeled gular scales as in *Tropidolamus*. I find that *Echis squamata* of Hallowell exhibits the same peculiarity. In this respect these species differ from *Echis arenicola* Gray; moreover, they are tree-vipers, having a compressed body, angular gastrosteges and prehensile tails, just as in the American tree-moccasins,—species of *Thamnocenchris*, *Salvin*, and *Teleuraspis*† Cope. They further represent these genera in having uniserial urosteges. The keeled gular scales are found in *Tropidolæmus*, another *Crotalid* genus whose species abound in Malaysia; and *Megæra*, also one of the *Crotalidæ*, is an evident representative in the forests of Ceylon.

A very different type among the *Solenoglypha* (*Viperidæ* Cope) is the family *Atractaspididæ* (-inæ Cope.) *Atractaspis* and *Brachycranium* appear to be well defined genera. Whether Polemon Jan belongs here, and how it differs from *Atractaspis*, has not been stated. The *Elaps irregularis* Reinhardt, placed by Jan in that genus, and identified by Günther with the *A. inornatus*, is evidently the type of an unnamed genus. It differs from the other genera in its biserial urosteges. From *Homeroselaps* Jan, (*Pacilophis* Gth., preoccupied among Apodes), it differs externally in the two nasal shields. It may be called *Eurystephus*.

\* Rev. Mag. Zool., 1859, No. 12.

† Mr. Falvin speaks of *Teleuraspis* (P. Z. S., 1860, 459), as being cylindrical in form. However this may be with the *T. nitidus*, the *T. schlegelii* has a prehensile tail, and is much compressed.

*Tarbophis* sp. I have seen a specimen of a species of this genus, from Ooroomiah, Persia, which is possibly different from that found in Southern Europe. The head is relatively shorter, the vertical and particularly the occipital plates being less elongate. There are ten upper labials, all narrow and high, the fourth, fifth and sixth bounding the orbit. In Bonaparte's coll. specimen there are eight, eye over third, fourth and fifth as described by Duméril and Günther; the seventh is very minute, the eighth horizontal. There are eleven inferior labials; twelve in the Ooroomiah specimen, which has also three postoculars. Coloration much as in the *viva x*; there is a narrow vertebral line and the belly is very dark.

What this serpent should be named, if requiring it, is uncertain. The plates in Eichwald and Savigny's works resemble it, while the figures of Schlegel, Fleischmann and of the "Voyage dans la Russie Meridionale," etc. are different.

#### *Natrix leopardina.*

*Callopeltis leopardina*, Fauna Italica.

This species bears considerable resemblance to *Pityophis catenifer*. There seems to be no reason why Laurenti's original name for the *Callopeltis* or *Coluber flavescens* of some authors should not be retained as well as his *Coronella*, *Naja* and *Dipsas*; especially in view of the want of uniformity in the practice of naturalists in the matter. Besides the names above mentioned, the genus has received those of *Scotophis* (Baird et Girard) and *Elaphis* (Hallow. fide Dum.)

It contains the species *longissima* (*Col. flavescens* auct.), *quadrilineata*, *leopardina*, *rufodorsata*, *conspicillata*, *mandarina*, *callicephala*, in the Old World; *quadrivittata*, *gutata*, *laeta*, *confinis*, *rhinomega*, *vulpina*, *alleghehiensis* and perhaps others, in North America.

#### *Tyria gracilis.*

From Ahmednuggur, India, has been received this species, quite recently described by Dr. Günther as *Zamenis gracilis*. *Tyria* is an older name than *Zamenis*, hence we are compelled to write *Tyria atrovirens*, *T. ventrimaculata*, *T. hippocrepsis*, etc. While *Periops* Wagl. is rightly regarded by Günther as a synonym of *Tyria*, Fitzinger's *Chilolepis*, typified by *C. cliffordii*, seems to be a valid genus not generally recognized. The *Coryphodon fasciolatus* of Günther, poorly described by authors, seems to be a *Tyria*, if I have properly identified it. The separate posterior upper maxillary tooth is shorter than usual in the genus.

#### *Bascanium anthicum.*

Scales in seventeen longitudinal rows. Teeth equal. Head moderately distinct, plane in profile; supercilia prominent, muzzle rounded. Rostral plate much higher than broad, prominent. Seven or eight superior labials, eye over third and fourth or fourth and fifth. Nasals high, loreal oblique, as high as long. Two preoculars, inferior very small, superior not reaching vertical. Two postoculars; two large and two small temporals in contact with occipitals; the latter are rounded, broad, their common suture not so long as the vertical plate. Superciliaries broad; vertical laterally concave; postfrontals longer than prefrontals. Anal divided. Total length 34 inches; of rictus 10 lines; of tail 9 inches 3 lines.

Color black, varied with many yellow scales; which are either single or arranged in irregular spots; beneath yellow. Head brown, with yellowish brown spots which are most distinct on the occipital and labial regions.

The native country of this species is not certainly known; some circumstances lead me to think that it is from Siam. If so, we have another instance of the close similarity of North American and Eastern Asiatic forms. In Siam alone we have a *Plethodon*, and a form scarcely differing from

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*Thamnophis*,—viz.: *Prymniodon*. *Bascanium anthicum* is very nearly allied to *B. constrictor*: the only differences are in the outline of the front—plane in the former, arched in the latter—the more convergent canthus rostrales of the latter, and that of coloration.

*Uriechis nigriceps* Peters, *Homalosoma lutrix*, *Philothamnus semivariatus*, *Bucephalus typus* vars. *B. C. D.*, *Causus rhombatus* and *Clotho arietans* have been sent to the Academy from Umvoti, Natal, by our correspondent, the Rev. Dr. Grant.

*Contia modesta*.

*Ablabes modestus* Günther.

From Ooroomial. This species belongs to the same genus as the American *C. episcopa* and *C. mitis*, which principally differs from the *Homalosoma*\* of Africa in a divided anal plate. Perhaps the "*Ablabes*" with two nasal plates belong to a different genus: at all events the name adopted by most herpetologists must give way to Fitzinger's *Lycodonomorphus*, proposed for the *Coronella rufula* long previously.† Fitzinger did not give characters to his genera, on which account they ought to be rejected, were it not that it is impossible for naturalists to arrive at an agreement as to what constitutes a good, sufficient, insufficient, or nul diagnosis. It seems also to be rightly conceded by many, that an author cannot change his own name, if it be not preoccupied or false in signification. Thus, Wagler's *Catostoma* should be retained, though he afterwards altered it to *Geophis* (which I overlooked on a former occasion), as it is sufficiently distinct from *Catostomus*.

*Rhoptrura Peters* has been suspected by me‡ to be identical with *Charina Gray*, on account of the entrance of the style of structure of the plates as described by Dr. Gray, within the extensive range of variation exhibited by the latter genus. Prof. Peters has, however, shown that it does not possess palatine teeth; this character at once separates it from all other *Peropoda*.

*Cryptoblepharus wahlbergii* Smith.

From Umvoti, Southeastern Africa, whence also has been received *Euprepis vittatus* Gray, and a variety which is light olivaceous above; on each side a light band, which is dark-bordered above. Other markings obsolete.

*Gerrhosaurus bibronii* Smith.

Brown bordered. The internasal plate is very transverse, as figured by Wagler in the *flavicularis*, and widely removed from contact with the frontal by the extensive intervention of the contiguous fronto-nasals. Dr. Smith figures the latter as separate, and the former in contact, in both species.

*Mancus macrolepis* Cope.

*Char. gen.*—The same as that of *Chamæsaura*, except in the absence of the anterior pair of extremities. Tongue slightly emarginate at the tip. The animal upon which this genus is established, so closely resembles in generic and specific peculiarities the *Chamæsaura anguina*, that it may be doubted whether it is entitled to the distinction I have proposed for it. The question of the disappearance of organs is one of much interest. Our impression of the importance of a peculiarity as affecting generic or specific rank is derived from consideration of its constancy during the adult age of the animal. That the assumption of generic structural

\* Another genus, which only differs from *Homalosoma* in its more slender tail and diacranterian dentition, is *Cryptodacus*, (*Gundlach*, Monatsb. Akad. Berlin, 1861, 1002.) *C. vittatus* is found in Cuba; it was described in November. In the following February the author introduced it as *Arrhyton bivittatum* (in Proceed. Philada. Acad.) The specimen described wants the dorsal band.

† Proceed. Acad. Nat. Sci. Philada., 1860, p. 256.

‡ L. c., p. 305.

peculiarities\* takes place at very different points in the advance of development of animals as compared with each other, all very well known.† If such change took place only in case of unusually prolonged life of certain individuals, we would have an instance of what we call the undependability of a character which we elsewhere rely on. This method of accounting among higher groups especially, for this phenomenon (with which students of nature are so familiar), may be worthy of being placed side by side with that which looks upon it as a state of transition from a condition of inferior to one of superior adaptation to peculiar circumstances of life,—or with the usual “accidental variation” subterfuge. The number of toes is justly relied on as a safe index to generic groups among Batrachia, Gradientia and Lacertilia, yet in *Amphiuma* its value is very doubtful, and in *Chalcides* it is not only not characteristic of the genus, but fails to be constant in the same species. The difference between a limb scarcely developed and one obliterated, possesses no greater significance than the same case among the digits; the genus *Trichiurus* illustrates this. As regards the absent members in the genus *Mancus*, they first appear (i. e. in *Chamæsaura*) in a condition of comparatively full development. The history of the latter process is, however, necessary in order to determine finally the validity of the separation of the genus which I have proposed.

The position of the two genera is near the *Epleopodidæ*, as Dr. Gray arranges them. In the *Erpétologie Générale*, *Chamæsaura* is one of the heterogeneous group called *Cyclosaura Ptychopleura*.

*Char. specif.*—Generally as in *Chamæsaura anguina*. The plates of the head are the same; they are elongate, especially the interparietal, which is bounded on each side by two parietals. The scales are large, very acute and strongly keeled, in only twenty-two longitudinal rows on the body, (four less than in *C. anguina*), of which the two dorsal are largest. Thirty-six transverse series from temple to vent. Eight scales border the vent; one femoral pore. Tibia shorter than femur, not terminating in a claw, both covered with keeled scales.

Length of head and body 5 inches 10 lines; of tail 19 inches 9 lines.

General color pale brown, whitish beneath, shaded with coppery above. Two brown bands extend from the occiput on the outer half of each median row and all of the row next exterior, to the end of the tail. A trace of a lateral band is seen on the second and third rows below the dorsal.

This lizard was sent to the Academy of Natural Sciences from Natal, in a collection made by the Rev. Mr. Grout. Other species contained in it were *Chamæleo dilepis* Leach, *Monitor niloticus* Gray, *Stellio capensis* Dum., and *Agama nigricollis* Smith. In the last it may be noted that the liver-brown variations enclose three light brown rhombic spaces on the dorsal line. General tint above rather dark brown. Fourth toe a trifle longer than third. A strong dorso-lateral dermal fold on each side.

*Lacerta strigata* Eichw.

Regarded by Duméril and Bibron as a variety of *L. viridis*, but believed to be distinct by Gray, Berthold and others. The specimen at my disposal differs from *L. viridis*, from the same region and from Italy, in its relatively smaller head and smaller and more numerous plates of the collar. The temporal shields are quite similar.

*Dactylethra laevis* Gthr.

*Rana ?mascariensis* D. B.

General form slender; head elongate, narrow, muzzle prominent. Distance

\* i. e. Those which illustrate a greater or less advance towards the extreme of divergence of the family series.

† Vide Synopsis of *Holcosus* and *Ameiva*, etc., p. 6.

between external nares and orbit to that between nares and end of snout as three to two. Skin without corrugations, but with numerous elongate longitudinal plicæ. Tympanum half the size of the orbit. Ostia pharyngea not larger than internal nares. Vomerine teeth in nearly transverse series, commencing at the anterior margin of the nares. No vocal vesicles. Second finger little shorter than fourth; terminal phalanges, especially of the toes, acute. One metatarsal tubercle. Web reaching the base of the antepenultimate phalanx of the very long fourth digit; to the penultimate of the others. Length of head and body 1 in. 3 lin.; of posterior extremity 2 in. 1 lin.

Above brown, with a pale median line from the end of the muzzle, and a few darker brown small round spots. Superior labial and frenal regions pale. A dark blotch covers the tympanum. Femora and tibiæ distantly brown-banded. Beneath pure white.

The specimens at my disposal possesses the peculiarity in the form of the terminal phalanges, which is found in the *R. hexadactyla* and *leschenaultii*. The *R. mascariensis* is not recorded as occurring on the African continent.

#### *Dicroglossus angustirostris* Cope.

Outlines of muzzle convergent at an acute angle; the end obtuse, prominent. Canthus rostralis rounded. Nostrils vertico-lateral. Interorbital space a little wider than palpebra. Tympanum small, one-fourth the size of the eye. Skin of the upper surfaces coarsely tuberculous. End of first finger marking middle of third. Posterior extremities stout; a tarsal and two metatarsal tubercles. Toes half palmate. Tongue oval, obcordate. Ostia pharyngea larger than posterior nares; the latter very anterior. Muzzle to hinder border of tympanum 4 lin.; tympanum to end of coccyx 10 lin.; length of hinder extremity 1 in. 7 lin.

General color dark brown, hinder extremities and labial regions varied with darker. Below white, a large brown pectoral and several small labial spots. Groin pale, brown spotted.

*Dicroglossus a dolfi* Gthr., the other known species of the genus, is Himelayan. The discovery of the present species extends the range of the genus so as to coincide with that of *Tomopterna*, *Bibr*.

#### *Chilophryne dialopha* Cope.

Head broad; muzzle prominent, conic. Cranium strongly ridged. Pre- and postocular, supratympanic, and superciliary ridges well developed, the last making a very open angle with that of the canthus rostralis, and sending off posteriorly a parietal, which first converges toward that opposite, and then runs transversely on the occiput to meet it; failing in this by a very slight interval. A small nuchal pit. Tympanum in contact with postorbital ridge, only one-fourth the size of the orbit. Tongue small, narrow, half free; a strong symphyseal tubercle fitting a premaxillary pit. Paratoids large, short, subtriangular, lateral. Skin everywhere rigidly rugose, subspinous on the tarsus. The joints of the extremities are pale and appear swollen. Fingers slender; first shorter than second, which equals the third. One metacarpal tubercle only. Toes short, one-third webbed; two acute metatarsal tubercles, the internal large, incurved, like a flattened spur, yellow, brown tipped. Length of head and body 10 lines; of hinder extremity 12 lines. Above dark brown, with a pale vertebral band, on either side of which are two blackish dorsal spots, one temporal and one on the canthus rostralis. A black band from orbit to angle of mouth. Beneath light brown, blackish shaded.

This very distinct species is said to have been brought from the Sandwich Islands by the American zoologist, John K. Townsend. Museum Academy, Philada.

*Hyperolius horstocckii* Gthr. and *H. marmoratus* Rapp, have been obtained at Umvoti in Natal by the Rev. Dr. Grout.

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*Hyperolius concolor*.

*Ixalus concolor* Hallow., Pr. A. N. S. Philada., 1857, p. 72.

Head of medium size, as long as broad; muzzle not projecting, canthus rostralis straight, loreal region not concave. Tympanum concealed. Tongue large, broadly obpyriform, deeply emarginate. Fingers scarcely palmate, two terminal phalanges of fourth toe free. No tubercles or folds on the upper surfaces. Length of head and body 1 inch 6 lines; of hinder extremity 2 inches. Above dark brown; the brachium and femur similar to the back. No spots or bands. Below brownish white.

This species does not appear to have been described by Dr. Hallowell. Western Africa is its native country.

*Hyperolius cinctiventris* Cope.

Head quite broad; muzzle truncate; canthus rostralis concave. Frontal region broad, convex; eyes not very prominent. Tympanum concealed; tongue elongate broad and extensively notched posteriorly. Fingers one-fourth, toes half webbed. All the inferior surfaces except the gular, granulate, the median abdominal most coarsely. A strong postgular fold; another surrounds the median abdominal region, including an acute angle at the pubic region. A temporo-crural fold. Skin of upper surfaces with distant small tubercles. Length of head and body nine lines. Light yellowish brown above; a narrow brown line through the eye. Entire femur and under surfaces of extremities, also the annular space between the abdomen and the lateral and gular folds, black.

*Hyperolius spinifrons* Cope.

Tympanum concealed; head not broad, muzzle rounded; canthus rostralis rounded, swollen; nostrils anterior; profile continuous to lip. Tongue elliptic, deeply nicked; inner nares widely separated. Skin of upper surfaces smooth, except upon the front and muzzle, where it is studded with acute tubercles as in the cyprinid genera *Ceratichthys*, etc. Digits slightly palmate. Appressed femur scarcely exceeding elbow. Length of head and body one inch. Beneath brownish yellow; above yellowish brown, with a dark brown lateral band between the eye and groin, which is pale bordered anteriorly; also a median band which commences between the eyes, and becomes wider and more indistinct posteriorly. Extremities brown, immaculate; femur not paler than tibia; brachium yellow all round at axilla.

*Hyperolius sugillatus* Cope.

Tympanum concealed. Head very broad, eyelids not much developed; outlines of muzzle convergent, truncate; profile of its extremity vertical. Tongue rounded, broadly emarginate; ostia pharyngea well developed. Brachium very short; fingers slightly, toes three-fifths, webbed. Hinder extremities long; appressed femur reaching much beyond elbow. Skin above weakly corrugated. Length of head and body one inch. Belly yellow; above straw color, a yellow band extending from end of muzzle to sacral region; it is bounded beneath on the muzzle by a purple line; there is also a purple spot upon each eyelid, (whence the name.)

The four species of *Hyperolius* here described as new, and the *Crumenifera pusilla*, formed part of the very valuable collection made by Mr. Grout at Umvoti.

*Hyperolius coccotis* Cope.

Muzzle prominent, subacute, canthus rostralis nearly straight. Frontal space more than twice the breadth of a palpebra. Tongue as broad as long, roundly emarginate. Ostia pharyngea smaller than posterior nares; tympanum concealed. Skin of the upper surfaces smooth. A supra-axillary fold. Coarse granulations posterior to orbit and round canthus of mouth; abdomen

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and femora coarsely areolated. Fingers one-fourth, toes more than half webbed. Length of head and body 1 in. 5 lin.; of hinder extremity 1 in. 9 lin. Above greenish blue, darkest on the head; beneath yellowish.

*Crumenifera pusilla* Cope.

Fam. Polypedatidæ: characters those of *Hyperolius*, except in the presence of a large vocal vesicle, which is prolonged posteriorly and bound beneath by a median frenum, on each side of which a plicate pouch projects deeply into the vesicular cavity.

Head small, muzzle short, truncate; canthus rostralis concave. Tympanum concealed. Tongue obovate, extensively free and deeply notched. Skin above smooth; of the abdomen transversely areolate; of the femora smooth. Fingers one-fourth, toes three-fourths webbed. Many granulations about the angle of the mouth. Length of head and body 10 lines; of hinder extremity 14 lines. Color (in alcohol) pale straw color; a faint brown line on the canthus rostralis.

It may be mentioned in this connection, that the genus *Heteroglossa* of Hallowell is a Polypedatid, not a Ranid as has been hitherto supposed. The statement regarding mandibular teeth, "nine in the lower jaw," should be read "none in the lower jaw." It differs from *Hyperolius* in the less development of the digital expansions and greater tenuity of the median attachment of the tongue.

*Neurergus crocatus* Cope.

Of the family Salamandridæ of the British Museum Catalogue,\* and sub-family Tritoninæ (*Pleurodelidæ* Gray, Proc. Zool. Soc., 1858, 137), and second section, where the fronto-temporal arch is replaced by a ligament. There is a line of pores on the inferior lateral region; paratoids present, small; skin rough; tail much compressed; tongue free laterally and posteriorly.

This genus resembles *Hemisalamandra* (*Duges* not *Cope*; *Pyronicia* Gray part.) in every particular except the form of the tongue; in this it is similar to *Euproctus* and *Glossoliga*; it has not the fronto-temporal arch of these, nor the os quadrato-jugale of the latter. *Lissotriton* differs in wanting paratoids. The head is depressed as in *Salamandra maculosa*, but the muzzle is more rounded, as in *Amblystoma*. The eyelids are slightly developed. The palatine teeth are in two widely divergent series, whose angle of convergence is opposite to the posterior borders of the interior nares. The latter are widely separated. The skin of the sides is rather corrugated. The digits are all depressed, without fringe and rather elongate; the third and fourth posterior are equal. The anterior extremity appressed, extends to the heel of the ap-

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\* The system adopted by Dr. Gray in the work alluded to, is evidently the true one. The separation of the Spelerpine from the Amblystomidæ as a group of equal rank with it, as proposed by the author of the present notice, is unnatural. Dr. Gray's later arrangement of the Salamandridæ (*Salamandrinæ* Cope) supplies a great desideratum, which the author attempted later and in ignorance of the memoir of the English savant.

On reviewing my former work in connection with the new light furnished by Dr. Gray, the following seems to be the nearest approximation to truth to which I can arrive at present:

Tritoninæ (*Tritones* Cope, *Pleurodelidæ* Gray.) Genera *Pleurodeles*, *Glossoliga*, *Notophthalmia* (this genus I now believe to be distinct from the next), *Cynops* (incl. *Taricha* Gray), *Euproctus* (incl. *Calotriton* Gray), *Lophinus* Raf. (incl. *Ommatotriton* Gray, equivalent to *Triton*, *Ommatotriton* Cope, exclus. *T. alpestris*), *Lissotriton* (wants the paratoids of *Hemisalamandra*; is not characterized by the freedom of the tongue posteriorly; \* includes *Hemitriton* Duges, Gray, *alpestris*, in which I find a lateral line of pores.†) *Neurergus*, *Hemisalamandra* (*Triton* § *Triton* Cope, *Pyronicia* Gray,) *Triton* (*Hemisalamandra* Cope): ten genera.

\* As stated Proc. Acad. Nat. Sci., 1859, p. 127.

† In specimens labelled by Bonaparte; they are stated by Dr. Gray to be wanting.

pressed hinder limb. Soles smooth; tarsus very broad. Tail longer than head and body, not much elevated, compressed, subcylindrical at base; a slight rudiment of a crest. Total length 6 inches 6 lines; of tail 3 inches 6 lines.

General color above brownish black; this is everywhere relieved by large oval yellow spots; of the latter those on the inferior lateral region are more or less confluent with the deep saffron of the abdomen. Chin and median line of tail beneath rather paler than belly.

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The following verbal communication should have been inserted under date of August 5th:

Mr. Cope called attention to a curious Cuban Bufonid (*Peltophryne empusa*) for the possession of which the Academy was indebted to Professor Philippe Poey of Havana. The genus, which had not been previously characterized, differed from *Bufo* and *Chilophryne* as did *Trachycephalus* from *Hyla* among tree-toads; *i. e.* in the dermo-osseous coating of the head. Thus two of the predominant genera of the regio neotropica are represented in this insular portion of it by types differing from them in the same manner. The continental portion of the region is known to abound in forms characterized by peculiar dermo-ossifications. Such are its Batrachian genera *Calyptocephalus*, *Brachycephalus*, *Ceratophrys*, *Phrynocerus*; its Alligatoridæ, its Goniodontidæ, and shielded Nematognathi.

In *P. empusa* the ossification was more extensive than in *P. peltoccephala*, and in one respect was farther developed than in the genera *Phrynocerus* and *Ceratophrys*; inasmuch as a broad bridge connected the mastoid and quadrato-jugal regions, extending posterior to the tympanum. The covering-in of the maxillo-quadrato sinus was a degree of ossification in both species of *Peltophryne* not observed in the two genera mentioned; nor did it possess the (?) crotaphite foramen exhibited by them. Externally in the latter region the dermo-ossification was like that of *Ceratophrys dorsata*, and less extensive than in *Phrynocerus testudiniceps*.

The prominence of the superior labial border, and other points of physiognomy, produced a peculiar grotesqueness in the expression of the animal, which suggested the trivial name. The following diagnosis was offered:

Supraorbital ridges very prominent, not crenate, presenting a posterior process. Postorbital and supra-tympanic processes prominent, obtuse; preorbital straight, more acute. Canthus rostrales acute, converging so as to produce a very acute angle; their profile very declive, that of the muzzle more so, but not perpendicular. Maxillary region oblique from a front view; the labial border forming a prominent rim, which is thickened and everted posteriorly. Two occipital knobs on each side. Tympanum small, one-fourth or one-third the length of the palpebral border in diameter. Paratoid gland small, rounded, lateral, studded with warts; the dorsal region is similarly studded, most abundantly anteriorly. Sides, extremities and gular region covered with smaller warts; belly areolate. One large oval flat metacarpal tubercle; a large one at the base of the interior digit. Two metatarsal tubercles; the interior most elongate and acute, blackish brown. A short, thickened, internal tarsal fold. Toes half-webbed, palm slightly rugose.

Length from end of muzzle to tympanum 11 lines; of ante-brachium and hand, 14.5 lines; axilla to vent, 2 inches; vent to end of fourth toe, 3 inches 1 line.

The head is brown; color elsewhere brownish yellow; on the nape and sides marbled with deep brown, somewhat oblique-longitudinally on the latter region. Limbs cross-banded with brown.

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